Wi MUST

Widely scalable Mobile Underwater Sonar Technology

European Commission

- **Consortium**

IST-ID (*Portugal*)

CINTAL (*Portugal*)

EL (*Germany*)

GEO (*The Netherlands*)

GS (*Portugal*)

CGG (*France*)

ISME (*Italy*)

UH (*United Kingdom*)

GT (*Italy*)

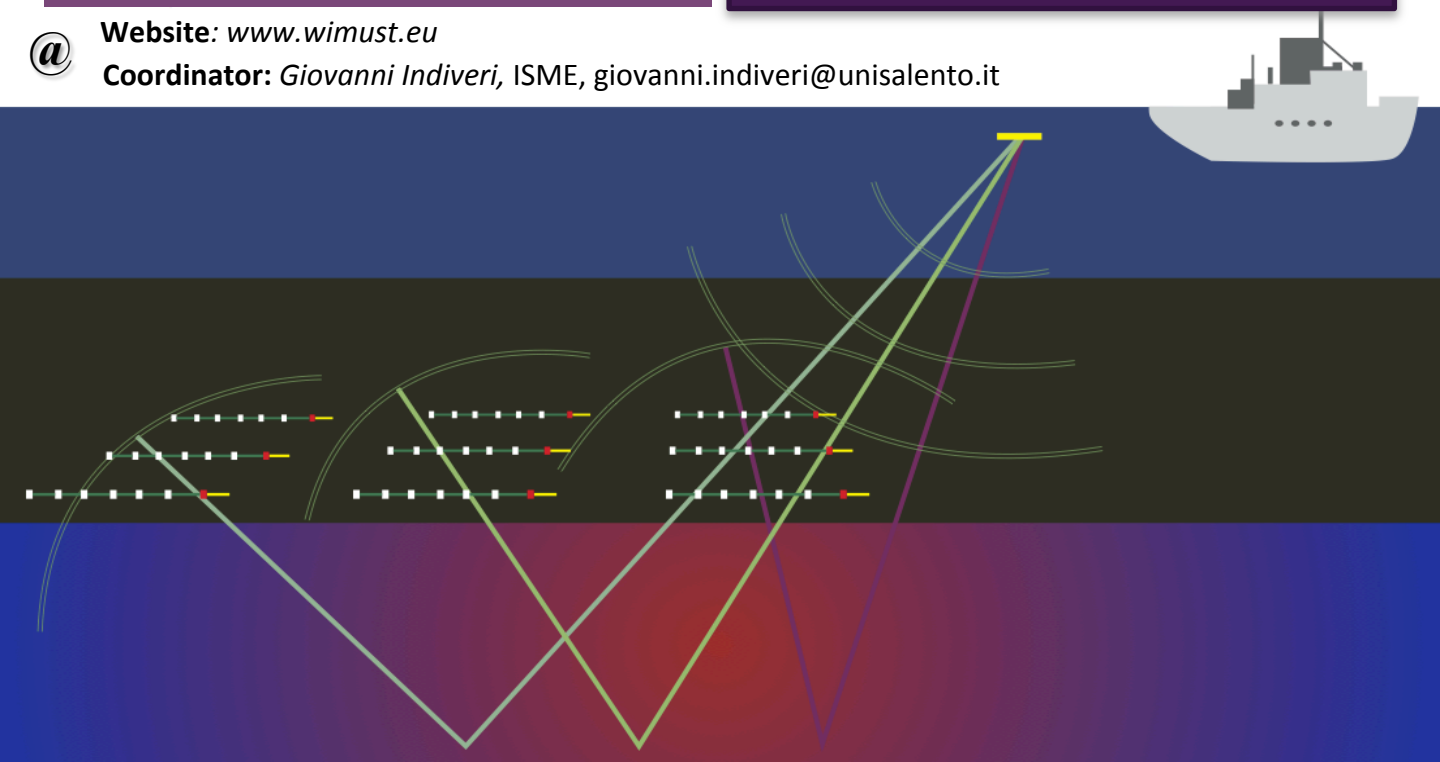
- **The project at glance**

- **Funding Scheme:** EU Horizon 2020
- **Total Budget:** 3.97M €
- **Start Date:** Feb 2015
- **Duration:** 36 months
- **EC Call:** Robotics
- **EC Keywords:** Robotics for inspection and monitoring.

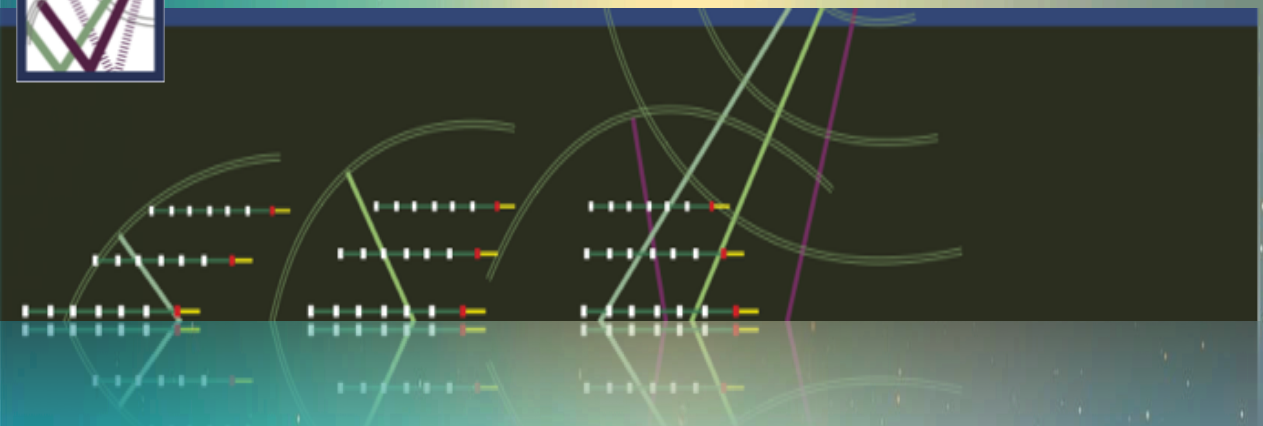
The WiMUST project aims at expanding and improving the functionalities of current cooperative marine robotic systems, effectively enabling distributed acoustic array technologies for geophysical surveying with a view to exploration and geotechnical applications as underwater construction, from peers and oil rigs to cable and pipeline.

Website: *www.wimust.eu*

Coordinator: *Giovanni Indiveri,* ISME, giovanni.indiveri@unisalento.it

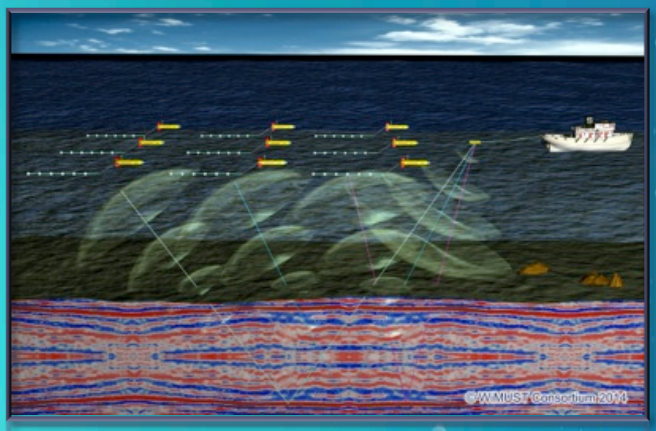


WiMUST



• Marine Seismic Survey Today

Traditionally, seismic reflection surveying for civil and commercial applications (e.g., underwater construction, infrastructure monitoring, mapping for natural hazard assessment, environmental mapping, etc.) aims at seafloor and sub-bottom characterization using vessel towed streamers of hydrophones acquiring reflected acoustic signals generated by acoustic sources.



• WiMUST Objective

WiMUST aims to drastically improve the methods available for geophysical and geo technical acoustic survey developing advanced cooperative and networked control/navigation systems that enable a large group of marine robots to act as an adaptive acoustic array with variable geometry.

• WiMUST Innovation

Thanks to the lack of physical ties with the vessel the group of vehicles can change its geometrical configuration shaping the distributed acoustic array. This will allow: to improve the seabed and sub-bottom resolution maximizing the information content extracted from the acquired acoustic signals; to obtain enhanced side lobe rejection; to facilitate the operation at sea in terms of time and costs.